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Turkish Pre-Service Teachers' Perceived Self-Efficacy Beliefs and Knowledge about Using Expository Text as an Instructional Tool in Their Future Classroom Settings

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Abstract: The aim of this research was to examine Turkish pre-service teachers' knowledge and perceived self-efficacy beliefs toward using expository text as an instructional tool in their future classroom settings. The research sample were 346 pre-service teachers who studied in different teacher preparation programs which included elementary classroom and middle content classrooms (for example, science, social studies and Turkish language arts) teaching professions. A teacher efficacy inventory and a knowledge test about using expository text were developed and administered to the pre-service teachers in a public university in Turkey. The research findings showed that there was a small but positive correlation between the pre-service teachers' self-efficacy beliefs scores and the knowledge test scores in spite of the small correlation coefficient between the two variables. In addition, the pre-service teachers rated their self-efficacy beliefs as efficacious in using expository texts in their future classrooms. They also identified themselves as having medium level knowledge about use of expository text. Results indicated that while there was not any significant difference regarding pre-service teachers' perceived self-efficacy mean scores in terms of gender, the pre-service teachers' knowledge mean scores about using expository text differed from each other according to gender. Moreover, findings revealed that the pre-service teachers' perceived self-efficacy beliefs and knowledge varied significantly from each other according to their training programs. The pre-service teachers' knowledge had significant differences among course years, in contrast to this, their perceived-self efficacy beliefs did not differ from each other according to course year. Additionally, the interaction between course year and training programs had significant effect on the teachers' perceived self-efficacy beliefs and knowledge about using expository text.

Introduction

While learning to read is important in early years of elementary school, reading to learn is more important in the later years of elementary school (Akhondi, Malayeri & Samad, 2011; Best, Floyd & McNamara, 2008; Durkin, 1989; Gajria, Jitendra, Sood & Sacks, 2007; RAND Reading

Study Group, 2002). Given these goals, texts used in these periods vary. Research suggests that while most practices for learning to read are performed with narrative texts, practices for reading to learn are mainly in relation to expository texts (Temple, Ogle, Crawford & Freppon, 2008). Differing text types and diverse text structures require activation of students' higher-level thinking and cognitive skills. Since most learning in schools is associated with reading printed materials, reading instruction involving a variety of text structures has become a focus for both researchers and educators. Given the content areas, reading different kinds of text structures has become more important. For example, Staglino & Boon (2009) state that comprehension is an important skill not only in language arts and reading classes but also across content areas and grade levels and that all teachers (Vacca & Vacca, 2008) play important role in helping students comprehend and respond to ideas and information in text.

According to the US National Assessment Governing Board (2006), proficient reading comprehension is defined as extending meaning from what is read by making inferences, drawing conclusions and making connections to reader's own experiences. Educators, linguists, and psychologists have noticed that reading comprehension also depends on monitoring the organization of text (Slater, Graves & Piche, 1985) and have undertaken many studies on this topic. Literature the studies concerned with text structures shows that it is much more difficult to extract meaning from complex expository texts than simple expository and narrative texts (Armbruster & Nagy, 1992; Best, Floyd & McNamara 2008; Bransford & Johnson, 1972; Brown & Day, 1983; Bryant, Ugel, Thompson & Hamff, 1999; Diakidoy, Stylianou, Karefillidou & Papageorgiou, 2005; Pearson, Hansen & Gordon, 1979; Singer, Harkness & Stewart, 1997; Yildirim, Yildiz, Ates & Rasinski, 2010; Winograd, 1984).

Moreover, studies with respect to reader's sensitivity to and awareness of text structures reveal that while sensitivity to the organisation of ideas in a text is correlated with recall and reading comprehension (Akhondi et al., 2011; Richels, McGee, Lomax & Sheard, 1987), other researchers (for example, McGee, 1982; Meyer, Brandt & Bluth, 1980; Taylor, 1980) have also found that sensitivity to the organisational structure has positive impact on reader's ability to recall. It appears that proficient and adult readers have more sensitivity to the text organisation than poor and/or young readers. Text structure or organization requires that the relationship among ideas and ideas in a text be skillfully arranged. Readers who are not familiar with text structures are disadvantaged, as they do not have any strategy for approaching a text (Akhondi et al., 2011; Berkowitz, 1986; Langer, 1985; Meyer & Rice, 1984; Meyer et al., 1980; Minskoff, 2005; Moss, 1993; RRSg, 2002; Taylor, 1980; Temple et al., 2008).

There are many factors that affect the understanding of an expository text. These include a variety of text structures, specific and technical terms, topic familiarity and the reading level of the individual. The understanding of content texts is affected by the readers' background, the requirement of transforming unorganised thoughts into conceptual knowledge, the reader's interest and motivation, and the familiarity with text organisational patterns. Young students wrestle with these texts because instruction includes more narrative texts (Armbruster, Anderson & Ostertag, 1987; Armbruster & Nagy, 1992; Bryant et al., 1999; Saenz & Fuchs, 2002; Moss, 1993; Taylor & Beach, 1984; Williams, 2005). Given the reasons why understanding expository text is difficult for students, teachers and schools have a responsibility for teaching effective skills for non-fiction reading.

There is accumulating research showing that teaching about text structures has a positive effects on students' learning (Adams, Carnine & Gersten, 1982; Armbruster et al., 1987; Taylor & Beach, 1984). While Carrell (1985) claimed that instructions regarding text structures had a

positive effect on students' recall, other studies suggested that this varied according to different age groups (Hall, Sabey & McClellan; 2005; Slater, Graves & Piche, 1985). Akhondi et al. (2011) and Blachowicz & Ogle (2008) argue that one of the ways of reaching text meaning of the text through reading is the acquisition of familiarity with the ways in which authors organise information.

Students who are not familiar with expository texts organised differently have difficulty understanding the organization of the text as well as making inferences from the text patterns. It becomes more important to be able to read content area materials and texts when students are enrolled in upper grade levels since they start to face wide range expository text structures. This situation makes guidance and instruction on expository texts important (Berkowitz, 1986; Crowe, 2007). In this regard, teachers' knowledge and perceived self-efficacy beliefs toward expository texts are vital factors in having students learn effectively from them.

Most researchers agree that knowledge of text structure is an important underlying component of expository text comprehension (as cited in Hall, Markham & Culatta, 2005). Teachers' perceived self-efficacy beliefs predict a variety of critically-important variables such as their teaching processes (Brouwers & Tomic, 2000). There is increasing evidence that personal cognitions affect the instigation, direction and persistence of behaviors. Various theoretical traditions point to the importance of individuals' beliefs, which are concerned with their capabilities to exercise control over important aspects of their lives (Schunk, 1989). It has been said that 'self-efficacy is one of these personal cognitions, defined as people judgments of their capabilities to organize and execute courses of action to attain designated types of performances' (Bandura, 1986, 391). Thus teachers' perceived self-efficacy beliefs and knowledge about using expository text as is an instructional tool that can influence how well their students learn.

Expository writing is the type of writing found in nearly all content area text books, so learning from these texts is an important part of the learning process in virtually all subject areas. In fact, when hands-on learning is combined with text-based learning, students learn more across content areas (Berkowitz, 1986; Neufeld, 2005-2006). Accordingly, sensitivity to how a text is organised is an important requirement for understanding texts. However, research has shown that teachers' practices about reading across content areas differ. This is most likely associated with the sensitivity of teachers to content area reading strategies and the teachers' awareness of these strategies and priorities. Certainly, these affect whether or not teachers use these strategies. Besides, other research shows that there is a widening gap between teachers' real practices in the classroom settings and their knowledge on reading strategies (as cited in Ulusoy & Dedeoglu, 2011). 'Teachers are not always provided opportunities to think about such things as how and why reading strategies can be applied to texts they use and how these purposes may change across content areas' (Hall, 2005, 404). According to Moje (2008), research over the past two decades documents that in-service teachers rarely employ content area literacy strategies in their classrooms. This deficiency, as Mallette et al. (2005) note that it may be that teachers feel that responsibilities and skills relative to reading were responsibilities of language art teachers. Alternatively, teachers may regard these strategies as ineffective and time-consuming (Moje, 2008).

With respect to the literature about pre-service and in-service teachers' beliefs toward reading instruction in content areas, Hall (2005) reported that teachers have different beliefs. Some teachers believe that they are not qualified to teach reading and that reading instruction should be provided only by language arts teachers. Others think that reading instruction is very

important in content areas and they would like to teach reading although they have limited familiarity with reading instruction in content areas. Temple, Ogle, Crawford & Freppon's (2008) study argued that when students' grade level increases, content area reading becomes more important, but content area teachers are not familiar with literacy strategies and this makes it challenging for them to incorporate literacy resources into their instructional settings.

Ass reading and content are integrated in elementary grades, students need to have both 'learn to read' and 'read to learn' abilities (Moss, 2005). No matter which type of text is used, specific strategies required for each text structure should be taught to students. Students need to know how to analyse a narrative text structure and expository text organisations in order to understand text (Minskoff, 2005). This process is the responsibility not only of language arts but of all stakeholders.

Content area teachers have focused on content instruction, rather than giving attention to the way to read texts (for example, Durkin, 1978-79; Hall, 2005; Ness, 2006; Rieckhoff, 1997; Slinger, 1981). There have been a few studies exploring the practices of content area teachers in relation to reading instruction in Turkey. Akyol & Ulusoy (2010) found that pre-service content area teachers regarded themselves as being responsible for their future students' reading skills. Ulusoy & Dedeoglu (2011) investigated science, social studies and classroom teachers' beliefs about literacy and content area practices. Their research revealed that teachers did not employ specific reading and writing strategies. In addition, Ates (2011) concluded that classroom teachers did not utilise any specific literacy strategies in their Turkish language arts classes. The limited research on this subject in Turkey suggests that teachers do not have any implementation techniques for improving reading skills and increasing awareness of text structures in either Turkish language arts or content area classes.

Teacher Efficacy and Teacher Education Programs in Turkey

Teacher efficacy has been defined as 'the extent to which the teacher believes he or she has the capacity to affect student performance' (Berman, McLaughlin, Bass, Pauly & Zellman, 1977, 137). Bandura (1993) argued that one principal factor that differs from school to school and is connected to student achievement is the teacher efficacy. Teacher efficacy can affect both the kind of environment that teachers create and the various instructional practices used in the classroom (Bandura, 1997). Most research has found relationships between characteristics of teachers and the learning outcomes of students (Eslami & Fatahi, 2008; Goddard, Hoy & Hoy, 2000; Hoy & Woolfolk, 1993; Tschannen-Morgan, Hoy & Hoy 1998; Woolfolk & Hoy, 1990). Teacher efficacy is related to many significant variables, such as student achievement, classroom management strategies, student motivation, teachers' adaptation to innovation and ratings of teacher competence (Woolfolk & Hoy, 1990). Because of these factors, pre-service teachers' sense of efficacy also was considered as variable in this study.

Teacher preparation programs are organised in order to train teachers needed in the short and long-term for elementary, middle and high school education in Turkey. Elementary and middle school professional programs require a four-year education. During this process, pre-service teachers take courses in content areas, general culture and pedagogical knowledge. In addition, they are enrolled in field experience at schools in the third and final years. In the second semester of the third year, the pre-service teachers are enrolled in teaching practicum process, they just observe learning environments at a school. During this observation period, they increase their familiarity with school, students, school curriculum and experienced teachers'

teaching practices. In the first and second semesters of the fourth year, the pre-service teachers increase their teaching experience in the real classroom settings instead of doing observations. They prepare lessons plans for courses in the predetermined day of the week and use them in their teaching. Pre-service teachers get teaching certificates upon completion of the program. Teachers who obtain the certificate have to also pass a qualifying exam to be able to work at schools. The teacher education programs and qualification exam are organised by the Council of Higher Education (TCoHE) and Ministry of National Education (MoNE). Having reviewed course contents in the teacher preparation programs, we would argue that the importance of text structures and content area literacy strategies are neglected in Turkish teacher education.

There is a need for research to determine pre-service teachers' knowledge and perceived self-efficacy beliefs about using expository text as an instructional tool in their future classrooms practice. This study attempts to fill this gap in the literature because Pajares (1992, 328) states that 'Research on the entering beliefs of pre-service teachers would provide teacher educators with important information to help determine curricula and program direction.' Additionally, because several studies have investigated effects of gender and course year differences in self-efficacy and knowledge (for example, Beynon & Oesch, 1993; Huang, Liu & Shiomi, 2007; Riggs, 1991; Pajares & Valiante, 2001; Shulman, 1987; Wong & Lai, 2007; Woolfolk, 2007), the present study also focused on effects of gender and course year differences in pre-service teachers' perceived self-efficacy beliefs and knowledge about using expository text as an instructional tool.

Method

Survey research design are procedures in quantitative research in which researchers administer a survey to a sample in order to describe people's thoughts, beliefs, feelings, attitudes, etc. toward something (Creswell, 2005). We used a cross-sectional survey design to collect data about the pre-service teachers' current self-efficacy beliefs and knowledge regarding the use of expository text as an instructional tool.

Sample

This study was conducted in a public university in Turkey's Kirsehir province with the pre-service teachers enrolled in a four-year teacher preparation program. The sample was composed of 346 pre-service teachers, aged from 18 to 26 who were studying different teacher education programs, including elementary and middle content (social studies, science, and Turkish language arts). There were 110 first-year students, 120 second-year students and 116 third-year of whom 218 were females and 128 males in the sample group. Eighty students were studying elementary classroom teaching, 97-Turkish language arts, 84-social studies and 85-science. We did not involve fourth-year pre-service teachers in this study since they were preparing themselves for the teaching qualification examination that they would have to take in order to be hired as a teacher by the MoNE.

The Instruments of the Study

We used an inventory and a knowledge test to collect data from participants about their perceived self-efficacy beliefs and knowledge about using expository text as an instructional tool. In the development of the inventory, after reviewing some books and articles that have been written on self-efficacy, we prepared a draft form that included 50 items (Bandura, 1977, 1982, 1986, 1993, 1995; Linnenbrink & Pintrich, 2003; Pajares, 1996; Schunk, 1989, 1991, 2003; Zimmerman, 2000). This inventory was designed according to five-level Likert item format. The format of five-level Likert item was (*Strongly Disagree*, *Disagree*, *Neither Agree nor Disagree*, *Agree* and *Strongly Agree*). Prior to administering this inventory on the actual sample group, we piloted it on similar group that included 100 pre-service teachers to determine whether or not it would be successful. After this process, we used reliability and item analyses to check if this inventory fitted our research aim. According to item-total correlations, we took out 19 items from the inventory. The items deleted had correlations below .30. After deleting the items that were not consistent with the inventory, we computed Cronbach's Alpha coefficient as $\alpha = .83$ for 31 items left in the inventory. The final version of the inventory to be administered had strong reliability. Also, the reliability coefficient of the scores obtained from the actual sample was computed as .81.

In order to evaluate the pre-service teachers' knowledge about expository text, we prepared a knowledge test. As shown in the research literature, we measured knowledge by the test and used a total test score as the index of teacher knowledge. There were 20 multiple-choice questions in the draft knowledge test. After revisions, we administered the improved test to an initial sample of typical respondents and examined the results for each item. In test construction, the proportion of respondents who answer correctly a test item is often referred to as the 'item difficulty'. We analysed test scores according to this rule then chose questions that had optimum difficulty and internally consistency. We deleted two questions that were not consistent with the rest of the knowledge test. After revisions, we computed the *KR20* coefficient as .86 for 18 questions. The final version of the test had high reliability. The *KR20* coefficient of the scores obtained was .83 after the knowledge test had been administered to the actual sample. We used *KR20* reliability coefficient for the knowledge test since Kuder-Richardson Formula 20 is a measure of internal consistency reliability for measures with dichotomous choices. In dichotomous choices, items on the instrument must be dichotomously scored (0 for incorrect and 1 for correct). That's why we preferred to use *KR20* coefficient for the knowledge test's internal consistency reliability. Additionally, although Cronbach's alpha is usually used for scores which fall along a continuum, it will produce the same results as *KR20* with dichotomous data (0 or 1) (Cortina, 1993; Kuder & Richardson, 1937; Tabachnick & Fidell, 2007).

Findings

In order to reach general understanding of the pre-service teachers' perceived self efficacy beliefs and knowledge about using expository text, we used descriptive statistics. According to these analyses, Turkish pre-service teachers rated themselves on the inventory about perceived self-efficacy beliefs as efficacious in using expository texts for their future classrooms ($N = 346$; $M = 3.42$; $SD = .44$). However, given the participants' knowledge mean scores ($N = 346$; $M = 11$; $SD = 2.94$), the scores on the knowledge test were in the average range regarding use of expository text according to a rubric developed by the researchers to evaluate the pre-service

teachers' knowledge scores obtained from the knowledge test. Also, we used inferential statistics such as ANOVA, *t*-test, and MANOVA to clarify significant differences on the pre-service teachers' self efficacy and knowledge mean scores according to gender, type of teacher preparation program and course year. SPSS 20 was used for all the analyses.

		Perceived self-efficacy beliefs		Knowledge	
		M	SD	M	SD
Gender ^a	Female	106.27	12.64	11.89***	2.82
	Male	105.70	15.26	10.85	3.06
Program ^b	Elementary (first to fifth grade)	104.51	14.42	12.14**	2.39
	Social studies	106.19	10.83	11.30	2.54
	Science	103.13	13.74	9.59	3.39
	Turkish language arts	109.88**	14.44	12.86**	2.34
Course yr ^b	First	106.66	13.52	11.97	2.59
	Second	105.13	14.37	11.63	2.94
	Third	106.59	13.10	11.03*	3.14

Table 1: Mean Scores and Standard Deviations of Pre-Service Teachers' Knowledge and Perceived Self-Efficacy Beliefs about Using Expository Text as an Instructional Tool

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

^aThe mean and standard deviation scores were obtained from the independent-samples *t* test.

^bThe mean and standard deviation scores were obtained from the ANOVA.

As shown in Table 1, an independent-samples *t* test was conducted to evaluate whether there were significant differences between male and female pre-service teachers according to their knowledge and perceived self-efficacy scores about using expository text as an instructional tool. The results indicated that while there was no significant difference between female and male pre-service teachers' perceived self-efficacy mean scores $t(344) = .370, p = .712$, the knowledge mean scores differed $t(344) = 3.204, p = .001$. According to this result, female pre-service teachers had more knowledge than males about using expository text as an instructional tool.

A one-way analysis of variance was conducted to determine whether the pre-service teachers' perceived self-efficacy and knowledge mean scores varied in terms of their training programs. Although the ANOVA was significant for the perceived self-efficacy scores $F(3,341) = 4.291, p = .005$, the strength of relationship between the perceived self-efficacy mean scores and the training programs, as assessed by η^2 , was small. The training programs only accounted for .04 percent of the variance of the perceived self-efficacy scores.

Follow-up tests were conducted to evaluate pairwise differences among the perceived self-efficacy mean scores of the pre-service teachers studying different programs. According to

Tukey HSD post-hoc comparisons, there was a significant difference in the means between the pre-service teachers who studied Turkish language arts teaching training program and science teaching training program. The pre-service teachers who studied Turkish language arts teaching training program had more perceived self-efficacy toward using expository text as an instructional tool than the pre-service teachers who studied science teaching training program.

For the knowledge of pre-service teachers about using expository text, the ANOVA analysis was significant $F(3,341) = 24.089, p = .000$ and the strength of relationship between the knowledge mean scores of the pre-service teachers and the training programs, as assessed by η^2 , was large. The teacher education programs accounted for .17 percent of the variance of the knowledge scores about using expository text as an instructional tool in classrooms. Follow-up tests were conducted to evaluate pairwise differences among the knowledge mean scores of the pre-service teachers studying different teacher education programs. According to Tukey HSD post-hoc comparisons, there was a significant difference between the groups that studied classroom and science. The pre-service elementary classroom teachers had more knowledge about using expository text than science teachers. In addition, there was a significant difference between the pre-service Turkish language arts teachers and the pre-service social studies teacher as well as between pre-service Turkish language arts teachers and pre-service science teachers. The pre-service Turkish language arts teachers had more knowledge about using expository text than science and social studies pre-service teachers.

Given the course year of pre-service teachers, a one-way analysis was conducted to find out whether the pre-service teachers' perceived self-efficacy and knowledge mean scores toward using expository text as an instructional tool varied in terms of their course year. Although the ANOVA was significant for the knowledge about using expository text $F(2,341) = 3.004, p = .051$, the strength of relationship between the knowledge mean scores about using expository text and the course year, as assessed by η^2 , was small. Follow-up tests were conducted to evaluate pairwise differences among the knowledge mean scores of the pre-service teachers studying in the course years.

According to Tukey HSD post-hoc comparisons, there was a significant difference in the means between the third-year and the first-year pre-service teachers. The former had more knowledge about using expository text as an instructional tool than the later. For the perceived self-efficacy mean scores of the pre-service teachers according to course year, the ANOVA was not significant $F(2,341) = .462, p = .630$. We also utilised a multivariate analysis of variance (MANOVA) to see whether the interaction of the pre-service teachers' course year, training programs and gender had a significant effect on their perceived self-efficacy and knowledge toward using expository text as an instructional tool. While the MANOVA analysis showed that the interaction of the pre-service teachers' course years, training programs, and gender was not significant [Wilks' Λ (.95), $F(12, 636) = 1.307, p > .05$.], the interaction between the pre-service teachers' course years and training programs had a significant effect on their perceived self-efficacy and knowledge about using expository text [Wilks' Λ (.93), $F(12, 636) = 1.917, p < .05$].

Variables	1	2
1. Perceived self-efficacy		.14**
2. Knowledge	.14**	

Table 2: Correlation Coefficient between Pre-Service Teachers' Perceived Self-Efficacy Belief Scores and Knowledge Scores about Using Expository Text as an Instructional Tool

Note. ** $p < .01$

A correlation coefficient between the pre-service teachers' perceived self efficacy scores and knowledge scores was computed. The result of the correlational analysis presented in Table 2 shows that the correlation between *perceived self-efficacy scores and knowledge scores* about using expository text as an instructional tool was statistically significant.

Discussion

One of the results of the study showed that although it was small, there was correlation between pre-service teachers' knowledge and perceived self-efficacy toward use of expository text effectively as an instructional tool in their future classroom settings. Many studies (for example, Bandura, 1993; Collins, 1982; Schoon & Boon, 1998; Schunk, 1999; Woolfolk, 2007; Woolfolk & Hoy, 1990) show that there is a relation between perceived self-efficacy and knowledge because self-efficacy serves a self-regulatory function by providing individuals with the capability to alter their environments and influence their own actions and by mediating between knowledge and actions (Bandura 1986; Pajares, 1996). In addition, self-efficacy beliefs influence how people feel, think, motivate themselves and act. There is a difference between possessing knowledge and being able to use it well under demanding conditions. Personal attainment requires both knowledge and self-efficacy beliefs. Thus a person with the same knowledge would perform, poorly, sufficiently, or extraordinarily according to variations in their self-efficacy beliefs (Bandura, 1993).

Furthermore, according to Bandura's social cognitive theory, personal factors, such as beliefs, knowledge, the physical and social environment and behavior, all influence and are influenced by each other. This is defined as 'reciprocal determinism' (Schunk, 1999, 2003; Woolfolk, 2007). What is more important is that although self-efficacy is important for achievement, it is not the only influence on achievement. In fact, one of the significant influences on achievement is knowledge. High efficacy will not produce efficient performance when the required knowledge is lacking (Schunk, 2003).

Knowledge and beliefs cannot be considered separately (Pajares, 1992). In that regard, we would infer that pre-service teachers who have adequate perceived self-efficacy and knowledge concerning using expository texts may effectively be able to create an academic environment where their students can become successful. Many researchers have documented that teachers' self-efficacy and knowledge about instructional processes lead to devoting more classroom time to academic learning, to providing students who have difficulty learning with the help they need to succeed, and to praising them for their accomplishments (Ashton & Webb, 1986; Barkley,

2006; Goddard, Hoy & Hoy, 2000; Gibson & Dembo, 1984; Woolfolk & Hoy, 1990; Tschannen-Morgan, Hoy & Hoy, 1998).

In addition, pre-service teachers who have high self-efficacy beliefs and knowledge on using expository texts to teach content-specific topics, can teach essential skills to students through cognitive modelling about how to use expository texts to derive meaning. Teachers who have knowledge and self-perceptions about using expository texts effectively as an instructional tool to teach content influence students' use of expository text to learn from them (Barkley, 2006). This process teaches students to take responsibilities for their learning and increases self-regulated learning. As a result, students become influential players in learning environment since their self-perceptions lead them into engagement or non-engagement. This can be explained by the statements of social cognitive learning theorists who contend that students' perceptions of learning context are main elements of their performances (Jinks & Lorsch, 2003).

The other result obtained from this research was that while there was not any significant difference on the pre-service teachers' perceived self-efficacy mean scores in terms of gender, their knowledge mean scores about using expository text differed according to gender in favour of the females. As explained by Bandura, sense of efficacy is a crucial predictor of performance and is affected by many factors, including gender (Pajares, 2002). Although there was no significant difference on the pre-service teachers' sense of efficacy according to gender in the present study, some researchers have argued that there is a significant difference between males and females' sense of efficacy toward different variables (for example, science, math, computer, language arts) in favour of either females or males (Pajares, 2003; Pajares & Miller, 1994; Pajares, Britner & Valiante 2000; Pajares & Valiante, 2001; Riggs, 1991). Others, whose findings are consistent with those of the present study claim that there is no significant difference between males and females' sense of efficacy (Busch, 1995; Gencer & Cakiroglu, 2007; Pajares, 2002).

Pajares (2002) argues that there are some factors leading to differences between males and females' sense of efficacy, such as previous achievement levels, differences in responses to self-report instruments, traditional assessments and stereotypic beliefs about gender. According to Pajares, gender differences can be caused by as a function of home, cultural, educational and mass media influences. Since we did not collect detailed data relevant to the pre-service teachers' background and put it into the analyses as variables, such reasons may have had effects on males and females' sense of efficacy and influenced the results of the present study.

In relation to the pre-service teachers' knowledge of content about using expository text, there was a significant difference in favour of female students. Shulman (1986, 8) asks questions such as 'What are the sources of teacher knowledge? What does a teacher know and when did he or she come to know it? How is new knowledge acquired, old knowledge retrieved, and both combined to form a new knowledge base?' to draw attention to the importance of teacher knowledge concerning certain subject matter. These questions are crucial to explaining the extent to which teacher knowledge is essential to teach subject matter effectively.

According to Fennema & Franke (1992), what teachers know is one of the underlying factors affecting what they do in classrooms and what students learn. Teaching is a highly complicated activity that utilises many kinds of knowledge. Expertise in teaching requires accessing highly organised systems of knowledge (Glaser, 1984; Putnam & Borko, 2000; Shulman, 1986, 1987). So teachers must know and understand the knowledge they teach. They must also understand the nature of knowledge in different fields, so teachers who do not have these understandings can misrepresent subjects to their students (Ball, 1996; Ball, Thames &

Phelps, 2008) and will not be able to correct students' misconceptions since they are unaware of them (Halim & Meerah, 2002).

Although we did not obtain any information for the present study that would have revealed the pre-service teachers' lack of content knowledge for using expository text, we know that merely having content knowledge and general pedagogical strategies are not sufficient to teach subject matter. Teachers also must know how particular content should be taught (Mishra & Koehler); that is, they must have pedagogical content knowledge to teach that content (Shulman 1986, 1987). Pedagogical content knowledge involves both knowing what teaching methods match the particular content and knowing how elements of the content can be arranged for better teaching (Mishra & Koehler, 2006). This study only provides a perspective on the importance of sense of efficacy and knowledge for using expository text effectively in classroom setting. More research needs to be conducted to understand relations between knowledge and general pedagogical strategies and pedagogical content knowledge regarding the use of expository texts for revealing whether pedagogic content knowledge is also crucial to using expository texts effectively in learning environments.

In the present study, female pre-service teachers had greater content knowledge about using expository text than did males. Our finding is consistent with the results of the previous studies showing that female pre-service or in-service teachers had more content knowledge in relation to certain topics than males (for example, Torff & Sessions, 2005; Wong & Lai, 2006). This finding may indicate that female student teachers work harder than males to gather information and put a lot effort into learn content, by contrast with male student teachers. As the authors of the present study, we believe that more research needs to be undertaken in Turkish context to figure out underlying reasons of this difference between Turkish female and male pre-service teachers. Accordingly, certain measures can be taken to decrease the difference between them and certain alterations can be made both teacher education programs and professional development activities for in-service teachers.

Our research showed that the pre-service teachers' perceived self-efficacy beliefs and knowledge varied significantly according to training programs and favoured the Turkish language arts teaching training program. This may be because every teacher education program has own unique content. By contrast with the other teacher education programs, the Turkish language arts teacher training program includes more courses about teaching literacy skills because those teachers who want to qualify for the Turkish language arts teaching profession certificate teach Turkish language arts to students in middle schools and are expected to have more familiarity with how to use expository text structures to teach subjects (see www.yok.gov.tr/en/). As we know, training and experience increase the self-efficacy and content knowledge of teachers and both variables have reciprocal relations (Park & Oliver, 2008; Woolfolk, 2007). Thus the pre-service teachers studying the Turkish language arts teacher training program may have had greater self-efficacy and content knowledge about expository text. Therefore, some courses and teaching experience related to literacy skills can be inserted into other teacher education programs for pre-service content area teacher to increase their knowledge and self-efficacy beliefs regarding using expository text as an instructional tool.

The pre-service teachers' knowledge showed significant differences among the course levels in favour of third-year pre-service teachers. However, their perceived-self efficacy beliefs did not differ according to course level. We believe that teaching profession practicum, which pre-service teachers must undertake, may have had an effect on third-year pre-service-teachers.

This experience exposes them to the teaching process and gives them more hands-on experience than first and second-year students.

There is accumulating information about teachers' knowledge and how it is developed (Park & Oliver, 2008). Most research in this field shows that experience is one of the underlying components of teacher knowledge and that there is significant variation between the knowledge of novice and experienced teachers about particular topic (for example, Ball et al., 2008; Geddis, Onslow, Beynon & Oesch, 1993; Grossman, 1990). Knowledge is often cited as a factor that distinguishes novice teachers from experienced ones. As elucidated by Shulman (1987), teacher's capacity for making certain knowledge sense for students in different ability and background groups is crucial to students' learning and affected by teacher's experience, and it is expected that an experienced teacher will translate subject matter into different learning forms that are more accessible to students.

There was no significant difference in the pre-service teachers' perceived self-efficacy beliefs according to their course level. Before we undertook the present study, we expected that third-year pre-service teachers would have a higher sense of efficacy toward using expository texts effectively in future classroom practice. We expected that they would make students learn more from these texts because they had more experience thanks to their teaching profession practicum.

Many researchers argue that mastery experiences are the most effective way of creating high self-efficacy (Bandura, 1982, 1986, 1993; Haverback & Parault, 2008; Kurbanoglu 2003; Woolfolk, 2007; Woolfolk & Hoy, 1990). Experiences such as professional development training seminars and teaching practicum experiences and student teaching experiences are seen more important (Fritz, Miller-Heyl, Kreutzer & MacPhee, 1995; Haverback & Parault, 2008; Fives, Hamman & Olivarez, 2007; Ross & Bruce, 2007).

Individuals make their self-efficacy beliefs by evaluating previous experiences. They develop beliefs about capabilities and get involved in subsequent activities based on their evaluations about their previous experiences (Kurbanoglu, 2003). For example, the study by Tschannen-Moran & Hoy (2007) found that novice teachers' perceived self-efficacy scores about classroom management and instructional practices were lower than experienced teachers. Moreover, Fives et al. (2007) claimed that real-world experiences, such as student teaching promotes self-efficacy. Knoblauch & Hoy (2008) found that pre-service teachers from rural, urban and suburban school districts reported that their self-efficacy beliefs improved after getting involved in student teaching experiences. Hoy & Spero (2005) also concluded that the pre-service teachers' perceived self-efficacy grew during student teaching.

We can infer that teaching experience has a positive effect in raising pre-service teachers' self-efficacy. However, in the present study, we did not find the similar result. This may be due to the quality of teaching practicum in which Turkish pre-service teachers begin to experience the teaching process. This is supported by research on pre-service teachers' teaching practicum experience that reported that Turkish pre-service teachers were not satisfied with their teaching practicum experience and content. It was argued that there was not a strong relationship between universities and schools and also teacher educators did not have sufficient experience on how to deal with the problems that pre-service teachers face. Experienced teachers in schools have been reported as having a lack of knowledge about practicum and not knowing how to guide pre-service teachers during it (for example, Candemir, 2007; Gomleksiz, Mercin, Bulut & Atan, 2006; Sag, 2008; Yapici & Yapici, 2004).

As authors and teacher educators, we believe that some Turkish pre-service teachers do not give much attention to teaching practicum experience. We can also say that they consider this process a bit unnecessary for obtaining jobs after graduating and that they prefer to focus on how to get good grades to get their teaching certificates.

Study Limitations and Directions for Future

In the present study, fourth-year pre-service teachers were not enrolled because they were preparing themselves for the teaching qualification examination. The fact that they were focused on preparing for the teaching qualification exam made us believe that they may not focus on filling the self-efficacy inventory and knowledge test out correctly since their attention may be on the teaching qualification exam. Given the relationships between personal experience, high-level self efficacy and knowledge, this situation may have affected the pre-service teachers' general self-efficacy and knowledge scores in the present study and prevented the researchers from obtaining stronger findings. Future research would involve four-year pre-service teachers as well and therefore reach robust and more detailed conclusions with respect to self-efficacy and knowledge.

Conclusion

The aim of this study was to investigate Turkish pre-service teachers' self efficacy beliefs and knowledge about using expository text as an instructional tool in their future classroom settings. In the present study, we did not reach any finding showing that Turkish pre-service teachers lacked knowledge and sense of efficacy on using expository texts in their classrooms. However, other results of this research indicated that the pre-service teachers' self-efficacy beliefs and knowledge varied according to the course year and the type of teacher training program. Particularly, third-year pre-service teachers had greater knowledge about using expository text than did first and second-year pre-service teachers. Additionally, the pre-service teachers studying Turkish language arts had more perceived self-efficacy and knowledge than the pre-service teachers in other teacher education programs. Consequently, we believe that teacher education programs need to be revised to expose pre-service teachers to literacy skills and teaching experience in order to increase their self-efficacy beliefs and knowledge. This should especially concerns pre-service content area teachers except for pre-service Turkish language arts teachers, because they do not take enough courses that teach using literacy skills effectively in learning environment and because they do not have enough teaching experience relative to the use of literacy skills. In every course year, pre-service teachers should be enrolled in teaching practicum. It is vital that first and second-year students have significant school experience in order to increase their knowledge and self-efficacy beliefs. Also a few courses related to use of literacy skill should be integrated into pre-service content area teachers' teaching education programs. Moreover, teacher educators' awareness of the teaching practicum should be increased and more information should be given to experienced teachers in schools on how to guide incoming pre-service teachers with respect to the teaching experience.

As stated before, one of the results of the study was that the pre-service teachers who studied Turkish language arts teaching training program had greater self-efficacy and knowledge

than other content area teachers, including social studies and science. We are familiar with many research studies and also believe that as in many other countries, Turkish content area teachers do not take enough courses on literacy skills and they do not believe that they have a responsibility to teach these skills to students. Research suggests that experience and training that encourage teachers to accomplish tasks in teaching will contribute to their sense of efficacy and knowledge; that is, pre-service teachers equipped with the capacity to use expository text structures effectively would have high sense of efficacy and knowledge about using expository texts in future classroom environments. The present study also emphasises the need to focus on how to best prepare teachers to impart essential skills to students when it comes to learning from expository texts. It also stresses the notion that the successfully established methods of teaching these skills need to be used in Turkish teacher education in conjunction with an effective system of school experience.

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